

CLAIMS

1. A remote sensing system for detecting the occurrence of an event and processing information about the detected event, the remote sensing system comprising:
 - a. at least one remote sensor including a transmitter and a sensor clock, the at least one sensor operable to transmit a message including information related to (i) the existence of a detected event and (ii) any time delay since the occurrence of the detected event;
 - b. a data collection hub including a receiver and a hub clock, the data collection hub operable to receive the message transmitted from the at least one sensor and calculate a time of occurrence for the detected event based upon (i) the time the data collection hub received the message transmitted from the at least one sensor and (ii) the time delay included in the message from the at least one sensor.
2. The remote sensing system of claim 1 wherein the data collection hub is further operable to subtract the time delay from the time the data collection hub received the message.
3. The remote sensing system of claim 2 wherein the data collection hub further comprises a microprocessor for calculating the time of occurrence of the detected event.
4. The remote sensing system of claim 2 wherein the data collection hub further comprises a memory for storing data including the detected event and the calculated time of occurrence for the detected event.
5. The remote sensing system of claim 4 wherein the memory is operable to note the time of receipt of the message transmitted from the at least one transmitter.
6. The remote sensing system of claim 4 wherein the data collection hub is further operable to determine whether the message transmitted from the at least one sensor includes information about a detected event that is the same event as a previously detected event.
7. The remote sensing system of claim 1 wherein the transmitter is a wireless transmitter.
8. The remote sensing system of claim 1 wherein the receiver is a wireless receiver.

9. The remote sensing system of claim 1 wherein the at least one sensor comprises a plurality of sensors, and each of the plurality of sensors is operable to transmit information related to a detected event to the data collection hub.
10. The remote sensing system of claim 9 wherein the data collection hub is further operable to sequence each detected event from each of the plurality of sensors.
11. A method for collecting sensor timing data comprising:
 - a. sensing an event using at least one sensor;
 - b. transmitting at least one message identifying the event and the time elapsed since the event;
 - c. receiving said at least one message at a central data collection hub; and
 - d. calculating a time for a sensed event by subtracting the elapsed time identified in the at least one transmitted message from the time the at least one message was received at the central data collection hub.
12. The method of claim 11 wherein the transmitting of the at least one message involves transmitting a plurality of messages containing an identifying header and the time elapsed between the detected event and transmission of the given message.
13. The method of claim 11 wherein the method comprises the additional step of sequencing an event relative to other sensed events according to the time calculated.
14. The method of claim 11 wherein the method comprises the additional step of determining whether a transmission identifies an event for which an earlier transmission has been received by the central data hub.
15. The method of claim 14 wherein the method comprises the additional step of deleting a transmission if the transmission identifies an event for which an earlier transmission has been received by the central data hub.
16. A method for collecting sensor timing data comprising:

- a. providing a central data collection hub having a receiver, a microprocessor, a memory, and a clock;
 - b. providing at least one sensor having a transmitter;
 - c. stimulating the at least one sensor;
 - d. transmitting at least one message containing information about the time elapsed between stimulation of the at least one sensor and transmission of the at least one message;
 - e. receiving the at least one message by the central data hub; and
 - f. calculating the time of stimulation of the at least one sensor by subtracting the time elapsed between stimulation from a time provided by the clock.
17. The method of claim 16 additionally comprising the step of sequencing a plurality of stimulations according to the respective calculated time of a given stimulation.
18. The method of claim 16 further comprising the step of repeatedly transmitting a message containing an identifying header and the time elapsed between stimulation and a given transmission for a given number of iterations.
19. The method of claim 18 comprising the additional step of identifying whether the transmitted message identifies a stimulation for which an earlier transmission has been received.
20. The method of claim 19 further involving the step of saving the transmitted message if the transmitted message identifies a stimulation for which an earlier transmission has not been received, or deleting the transmitted message if the transmitted message identifies a stimulation for which an earlier identifying transmission has been received.
21. The method of claim 16 wherein providing at least one sensor having a transmitter includes providing at least one sensor having a wireless transmitter.